# CIVIL TECH LABS

Accredited by **NABL** as per ISO/ IEC 17025 : 2005

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654


To,

Assistant Executive Engineer,
Yelahanka New Town Sub Division,
BBMP.

07th September 2015

Dear Sir,

**Sub:** Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04..
Testing of cubes – Reg.

As requested the 28th day Compressive Strength Test of Cubes was carried out for the above work for the samples supplied by you.

Please find the enclosed Test Reports of the above.

Thanking you,

AE W-4

**For Civil Tech Labs,**

CIVIL TECH LABS BANGALORE

**(KHUSHBOO)**
**Quality Manager**

# CIVIL TECH LABS

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT
## COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No.04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Grade of Concrete** | M-15 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area (mm²) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength (N/mm²) | Avg Compressive Strength (N/mm²) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-3 | 150.04 X 150.06 X 150.0 | 22515 | 10/08/2015 | 07/09/2015 | 28 | 8.20 | 352 | **15.64** | **15.79** |
| 2 | | 150.05 X 150.04 X 150.0 | 22514 | | | | 8.21 | 354 | **15.73** | |
| 3 | | 150.03 X 150.05 X 150.0 | 22512 | | | | 8.23 | 360 | **16.00** | |

**Note:**

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

AE W4

(KHUSHBOO.L)
Quality Manager

CIVIL TECH LABS BANGALORE

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No.04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Grade of Concrete** | M-15 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-2 | 150.06 X 150.04 X 150.0 | 22515 | 10/08/2015 | 07/09/2015 | 28 | 8.22 | 364 | **16.18** | **15.91** |
| 2 | | 150.11 X 150.09 X 150.0 | 22530 | | | | 8.21 | 358 | **15.91** | |
| 3 | | 150.03 X 150.06 X 150.0 | 22514 | | | | 8.19 | 352 | **15.64** | |

**Note:**

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AE W-4

(KHUSHBOO L.)
Quality Manager

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Grade of Concrete** | M-15 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area (mm²) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength (N/mm²) | Avg Compressive Strength (N/mm²) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-1 | 150.04 X 150.03 X 150.0 | 22511 | 10/08/2015 | 07/09/2015 | 28 | 8.20 | 352 | 15.64 | 15.79 |
| 2 | | 150.03 X 150.04 X 150.0 | 22511 | | | | 8.21 | 356 | 15.82 | |
| 3 | | 150.06 X 150.05 X 150.0 | 22517 | | | | 8.19 | 358 | 15.91 | |

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(KHUSHBOO)
Quality Manager

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# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654


To,

Assistant Executive Engineer,
Yelahanka New Town Sub Division,
BBMP.

10th September 2015

Dear Sir,

**Sub:** Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04..
Testing of cubes – Reg.

As requested the 28th day Compressive Strength Test of Cubes was carried out for the above work for the samples supplied by you.

Please find the enclosed Test Reports of the above.

Thanking you,

**For Civil Tech Labs,**

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

# CIVIL TECH LABS

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-4 | 150.02 X 150.03 X 150.0 | 22508 | 13/08/2015 | 10/09/2015 | 28 | 8.21 | 480 | **21.33** | **21.78** |
| 2 | | 150.06 X 150.05 X 150.0 | 22517 | | | | 8.22 | 500 | **22.22** | |
| 3 | | 150.04 X 150.06 X 150.0 | 22515 | | | | 8.20 | 490 | **21.78** | |

**Note:**

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AE W-4

(KHUSHBOO L.)
Quality Manager

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area (mm²) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength (N/mm²) | Avg Compressive Strength (N/mm²) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-3 | 150.03 X 150.02 X 150.0 | 22508 | 13/08/2015 | 10/09/2015 | 28 | 8.22 | 490 | 21.78 | 21.78 |
| 2 | | 150.04 X 150.03 X 150.0 | 22511 | | | | 8.20 | 480 | 21.33 | |
| 3 | | 150.05 X 150.06 X 150.0 | 22517 | | | | 8.21 | 500 | 22.22 | |

**Note:**

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4. The results are based on the test conducted on samples supplied by the customer.

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample 2 | 150.07 X 150.08 X 150.0 | 22523 | 13/08/2015 | 10/09/2015 | 28 | 8.22 | 505 | **22.44** | **22.15** |
| 2 | | 150.06 X 150.05 X 150.0 | 22517 | | | | 8.20 | 500 | **22.22** | |
| 3 | | 150.04 X 150.02 X 150.0 | 22509 | | | | 8.21 | 490 | **21.78** | |

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CIVIL TECH LABS BANGALORE

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Quality Manager

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area (mm²) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength (N/mm²) | Avg Compressive Strength (N/mm²) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-1 | 150.03 X 150.01 X 150.0 | 22506 | 13/08/2015 | 10/09/2015 | 28 | 8.23 | 500 | 22.22 | 22.00 |
| 2 | | 150.06 X 150.08 X 150.0 | 22521 | | | | 8.20 | 490 | 21.78 | |
| 3 | | 150.02 X 150.04 X 150.0 | 22509 | | | | 8.21 | 495 | 22.00 | |

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(KHUSHBOO L.)
Quality Manager

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# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654


To,

Assistant Executive Engineer,
Yelahanka New Town Sub Division,
BBMP.

03rd August 2015

Dear Sir,

**Sub:** Testing of Materials.

As requested, tests on physical properties were carried out for the Materials supplied by you, for the work of **'Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04.'**

Please find the enclosed Test Reports of the above.

**Thanking You,**
**For Civil Tech Labs**

AE W.4

Khushboo

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

# CIVIL TECH LABS

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT

TESTS ON REINFORCEMENT STEEL BAR 12 mm

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No.04. |
| **Name of the Agency** | M/s. K. R. I. D. L. |
| **Date of Testing** | 03/08/2015 |

| Sl.No. | Description | Result | IS 1786-2008 Min. Requirements | Remarks |
|---|---|---|---|---|
| 1 | Measured Diameter mm | 12 | 12 | Satisfactory |
| 2 | Wt/m Length (Kg/m) | 0.889 | 0.888 | Satisfactory |
| 3 | Bend & RebendTest | Pass | Should not Crack or Fracture | Satisfactory |
| 4 | Elongation (%) | 15.4 | 14.5 | Satisfactory |
| 5 | Yield Stress(N/Sq.mm) | 422 | 415 | Satisfactory |
| 6 | U T S (N/Sq.mm) | 528 | 485 | Satisfactory |

AE W.4

**Note:**

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CIVIL TECH LABS BANGALORE

**(KHUSHBOO L)**
**Quality Manager**

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Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT

TESTS ON REINFORCEMENT STEEL BAR 10mm

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of the Agency** | M/s. K. R. I. D. L. |
| **Date of Testing** | 03/08/2015 |

| Sl.No. | Description | Result | IS 1786-2008 Min. Requirements | Remarks |
|---|---|---|---|---|
| 1 | Measured Diameter mm | 10 | 10 | Satisfactory |
| 2 | Wt/m Length (Kg/m) | 0.618 | 0.617 | Satisfactory |
| 3 | Bend & RebendTest | Pass | Should not Crack or Fracture | Satisfactory |
| 4 | Elongation (%) | 15.1 | 14.5 | Satisfactory |
| 5 | Yield Stress(N/Sq.mm) | 420 | 415 | Satisfactory |
| 6 | U T S (N/Sq.mm) | 525 | 485 | Satisfactory |

AE W-4

**Note:**

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Khushboo

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L)**
**Quality Manager**

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## TEST REPORT

TESTS ON REINFORCEMENT STEEL BAR 8 mm

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of the Agency** | M/s. K. R. I. D. L. |
| **Date of Testing** | 03/08/2015 |

| Sl.No. | Description | Result | IS 1786-2008 Min. Requirements | Remarks |
|---|---|---|---|---|
| 1 | Measured Diameter mm | 8 | 8 | Satisfactory |
| 2 | Wt/m Length (Kg/m) | 0.396 | 0.395 | Satisfactory |
| 3 | Bend & RebendTest | Pass | Should not Crack or Fracture | Satisfactory |
| 4 | Elongation (%) | 14.8 | 14.5 | Satisfactory |
| 5 | Yield Stress(N/Sq.mm) | 418 | 415 | Satisfactory |
| 6 | U T S (N/Sq.mm) | 522 | 485 | Satisfactory |

AE W.4

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4. The results are based on the test conducted on samples supplied by the client.

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L)**
**Quality Manager**

# CIVIL TECH LABS

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT

## GRADATION TEST ON COARSE AGGREGATES 40mm ↓ Graded

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No 04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Date of Testing** | 03/08/2015 |
| **Specific Gravity** | 2.66 |
| **Water Absorption** | 0.29% |
| **Technical Reference** | IS : 2386(Part I)-1963 (Reaffirmed 2011), IS : 2386 ( Part III )-1963 (Reaffirmed 2011 ) |

| IS Sieve Designation (mm) | Sieve Analysis (% Passing IS Sieve) | Grading Requirement as per IS:383-1970 (Reaffirmed 2011) | Remarks |
|---|---|---|---|
| 80 | 100 | 100 | Satisfies the requirement |
| 40 | 99.2 | 95-100 | |
| 20 | 54.1 | 30-70 | |
| 10 | 25.4 | 10-35 | |
| 4.75 | 3.3 | 0-5 | |

AE W-4

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4. The results are based on the test conducted on samples supplied by the customer.

**(KHUSHBOO.)**
**Quality Manager**

CIVIL TECH LABS BANGALORE

# CIVIL TECH LABS

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT

## GRADATION TEST ON COARSE AGGREGATES 20mm ↓ Graded

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No.04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Date of Testing** | 03/08/2015 |
| **Specific Gravity** | 2.63 |
| **Water Absorption** | 0.32% |
| **Technical Reference** | IS : 2386(Part I)-1963 (Reaffirmed 2011), IS : 2386 ( Part III )-1963 (Reaffirmed 2011 ) |

| IS Sieve Designation (mm) | Sieve Analysis (% Passing IS Sieve) | Grading Requirement as per IS:383-1970 (Reaffirmed 2011) | Remarks |
|---|---|---|---|
| 40 | 100 | 100 | Satisfies the requirement |
| 20 | 99.2 | 95-100 | |
| 10 | 45.3 | 25-55 | |
| 4.75 | 8.2 | 0-10 | |

**Note:**

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CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

# CIVIL TECH LABS

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT

## TEST ON CEMENT

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of the Agency** | M/s. K. R. I. D. L. |
| **Date of Testing** | 03/08/2015 |

| **Tests** | **Test Method As Per IS & Apparatus** | | **Results** | | **Requirements As Per IS 8112:1989** | **Remarks** |
|---|---|---|---|---|---|---|
| | **IS Code** | **Method** | **Value** | **Unit** | | |
| Initial Setting Time | **IS-4031 (Part-5) 1988** | VICAT | 49 | min | Not Less Than 30 Minutes | Satisfies Requirement |
| Final Setting Time | **IS-4031 (Part-5) 1988** | VICAT | 489 | min | Not More Than 600 Minutes | Satisfies Requirement |
| Soundness | **IS-4031 (Part-3) 1988** | LE-CHATELIER | 4 | mm | Not More Than 10 mm | Satisfies Requirement |

**Note:**

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3 Any correction invalidates this report.

4 The results are based on the test conducted on samples supplied by the customer.

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

# CIVIL TECH LABS

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT

## GRADATION TEST ON FINE AGGREGATES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka New Town Sub Division, BBMP. |
| **Name of Work** | Construction of size stone masonry drain & covering slab in GKVK layout from GKVK park to Hanumappa layout in Ward No:04. |
| **Name of Agency** | M/s. K. R. I. D. L. |
| **Date of Testing** | 03/08/2015 |
| **Specific Gravity** | 2.56 |
| **Technical Reference** | IS : 2386(Part I)–1963 (Reaffirmed 2011), IS : 2386 ( Part III )–1963 (Reaffirmed 2011 ) |

| Sample | IS Sieve designation (mm) | Sieve Analysis (% Passing IS Sieve) | Grading Requirement as per IS:383-1970 (Reaffirmed 2011) | | | | Grading Zone | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | ZONE-I | ZONE-II | ZONE-III | ZONE-IV | | |
| River Sand | 10 | 100 | 100 | 100 | 100 | 100 | II | Satisfies the requirement |
| | 4.75 | 98.6 | 90-100 | 90-100 | 90-100 | 95-100 | | |
| | 2.36 | 87.2 | 60-95 | 75-100 | 85-100 | 95-100 | | |
| | 1.18 | 75.1 | 30-70 | 55-90 | 75-100 | 90-100 | | |
| | 0.6 | 48.6 | 15-34 | 35-59 | 60-79 | 80-100 | | |
| | 0.3 | 27.1 | 5-20 | 8-30 | 12-40 | 15-50 | | |
| | 0.15 | 7.9 | 0-10 | 0-10 | 0-10 | 0-15 | | |

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(KHUSHBOO L)
Quality Manager

CIVIL TECH LABS BANGALORE